3.3.1: Number of research papers published per teacher in the Journals as notified on UGC CARE list during the last five years

3.3.1.1. Number of research papers in the Journals notified on UGC CARE list year wise during the last five years.

CALENDAR YEAR 2019

Title of paper	Name of the author/s	Department of the teacher	Name of journal	Calendar Year of publication	ISSN number	Link to the recognition in UGC enlistment of the Journal /Digital Object Identifier (doi) number		
						Link to website of the Journal	Link to article / paper / abstract of the article	Is it listed in UGC Care list
Cultural Change by Initiation of TPM in a Industry	Prof. Kunalsinh Kathia	Mechanical	Ijraset Journal For Research in Applied Science and Engineering Technology	May-19	ISSN: 2321-9653	https://www.ijraset.com/fileserve.php?FID=23009	https://www.ijraset.com/fileserve.php?FID=23009	Yes
Clinical Decision Support Systems	Prof. Poojan Shah	Department of Computer Engineering & Information Technology	International Journal of Scientific Research in Computer Science, Engineering & Information Technology	Apr-19	ISSN: 2456-3307	https://ijsrcseit.com/	https://ijsrcseit.com/paper/CSEIT1952264.pdf	Yes

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Cultural Change by Initiation of TPM in a Industry

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Abstract: ***The purpose of this paper is to show the cultural benefits and change that occur by the initiation of implementing TPM in a industry. The main purpose during the implementation process is to change the mindset of the employees and adapt the new way according to TPM methodology which mainly focuses on the worker getting the feel of ownership of the machine. Which directly leads to the cultural change in the industry which brings many changes in the existing industry.***
Keywords: TPM, 5S, Kaizen, OEE, Fugai, OPL.

I. INTRODUCTION

Total Productive Maintenance was started as an approach to maintenance which aimed to integrate equipment maintenance into the manufacturing process. Total Productive Maintenance was started as an approach to maintenance which aimed to integrate equipment maintenance into the manufacturing process. A 12 step structured pyramid, guides the organization through the deployment of 8 Pillars combined with a number of more traditional improvement tools. The word 'total' in TPM explains about total organization or total participation. Everybody in the association at all dimensions and over all capacities assumes a functioning job in TPM including contract and low maintenance workers. OEE is a metric which is created to quantify the accomplishment of beginning period of TPM programs. TPM begins with 5S. 5S is known as the establishment stone for actualizing TPM. It is a Japanese procedure of housekeeping. Mainly the improvement and progress if implementation process of TPM depend upon the behaviour of the employees as they are ready to adapt the change than it will be very fast but if they resist than it becomes hard for the process. As for this research I had been working with the a Welded pipe manufacturing company in Gujarat over a period of nine months in the implementation process of TPM across the six different plants of that unit so had brief and practical view of the research topic.

II. OBJECTIVE

The main objective of this research is to list the benefits of Total Productive Maintenance in the cultural aspect of an industry. As implementing any of the tool in a industry is not important but there should be change in the mindset of the employees. So we will see what are output or benefits by the initiation taken by the industry in respect to the culture of the industry. The implementing process of TPM is a very long process as it can up to 3-4 years for complete implementation of 8 pillars across the industry. So changes are in different ways as the change in the production process and other is the cultural change so here we will focus on the benefits of cultural change in industry.

III.OUTCOME

During the initial period of implementation of Total Productive Maintenance at the welded pipe manufacturing industry there were some friction between the employees and the TPM mythology as the employees does not want to change their routine and go according to their traditional method and so there were some ups and down during the initial period of implementation.

But as the time goes and some benefits were showed up in relation to the machine or production process the employees start understanding more about the lean tool and then they tried to understand it . So then after probably around completion of six months the employees started to understand the benefits of TPM and how will be it benefits them in their day to work plan.

So the important things which are included in the cultural development or improvements are as the employees started feeling the ownership of the machine and they try to keep their machine in the best condition. So basically the maintenance practice which was done previously in the industry was done but was not properly managed or monitored but after the implementation o TPM started the maintenance practice was divided into different parts as TBM (Time Based Maintenance), CBM (Condition based Maintenance), Fugai identification, Kaizens were the initial steps which were taken in the industry. By this the maintenance work come under one screen and could be seen in a single glance. So there is a problem found than it could be identified easily as all could be seen on a single screen and it could be solved easily. By this all initial steps and work done the employees started to understand the benefits of TPM and its cultural as well as technical benefits in term of OEE. So they started to get the feel of ownership of their own machine.

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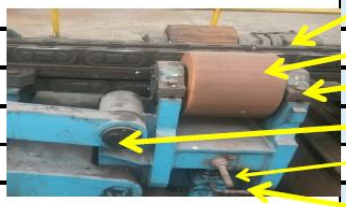
OPERATOR CLIT CHECK LIST - Reference Sheet for site activity

LSAW/TW/04 & 05/001

Assembly Covered	MHE (Chain Support Roller assembly6, 7 and 8 , Conveyor roller # 7, Rotator # 4)			Legend	Activity in stop condition	Min
Station No.	4 & 5	CLIT Sheet No.		1	Revision no.	Activity in Run condition	Min

Sr	Clit No.	Particulars	Photograph	What	Freq	Why	How	Time
1	164, 166	Support toller unit no. 6		Support roller unit cleaning	W	To avoid the contamination of dirt and dust and To identify the abnormilities	Manual cleaning with cotton and diesel	10
2	176, 178	Support toller unit no. 7						
3		Support toller unit no. 8						
4		Support toller unit no. 6		Housing unit mounting bolts	Y	To prevent looseness and subsequent misalingment/dislocation.	visual check of fastner match mark (OPL # 5)	2
5		Support toller unit no. 7						
6		Support toller unit no. 8						
7		Support toller unit no. 6		Roller ass mounting	HY			2
8		Support toller unit no. 7						
9		Support toller unit no. 8						
10		Support toller unit no. 6		Support roller surface its rotation	HY	To ensure smooth chain movement.	Visual (Inspection of roller surface and its rotation)	5
11		Support toller unit no. 7						
12		Support toller unit no. 8						
13	165	Conveyor no-7 (Zone # 4)		Complete Conveyor assembly	W	To avoid the contamination of dirt and dust	Manual cleaning with cotton and diesel	10
14	177	Conveyor no-7 (Zone # 5)						
15	179	Conveyor no-7 (Drive Side -- Zone # 4)		Oil level of gear box	Q	To prevent lubrication failure	By visual inspection (OPL # 4)	2
16	180	Conveyor no-7 (Drive Side -- Zone # 4)		Gear box mounting fasteners	HY	To ensure fastener tightness and subsequent prevention of misalingment or dislocation.	visual check of fastner match mark (OPL # 5)	5
17		Conveyor no-7 (Drive Side -- Zone # 4)		Roller Unit mounting fasteners	Y			5
18		Conveyor no-7 (Non Drive--Zone # 5)						
19		Conveyor no-7 (Drive Side -- Zone # 4)		Gear box coupling fastners	HY	To avoid any abnormal condition in power transmission	visual check of fastner match mark (OPL # 5)	5
20	185	Rotator # 4 (Zone # 4 & # 5)		Complete rotator assembly cleaning	W		Manual cleaning with cotton and diesel	10
21		Rotator # 4 (Zone # 4 & # 5)		Rotator drive arrangement	M		visual check	5
22	183-184	Rotator # 4 (Zone # 4 & # 5)		PU rotator lining condition	W		visual check	2
23	182	Rotator # 4 (Zone # 4 & # 5)		Roller bracket mounting fasteners	Q		visual check	2
24		Rotator # 4 (Zone # 4 & # 5)		Up/down mechanism functioning	Q		visual check of fastner match mark (OPL # 5)	5
25	181	Rotator # 4 (Zone # 4 & # 5)		Hydraulic System leakage	Q		visual check	2
26		Rotator # 4 (Zone # 4 & # 5)		Hydraulic hose condition	M		visual check (OPL # 6)	2

Prep. By:	Checked By:	Approved By	Date:

Figure 1: CLIT Sheet

So this comes out as by a CLIT sheet which is known as Cleaning, Lubrication, Inspection and Tightening. This sheet includes all the machine parts and its important aspect in the single sheet which has its parts number mentioned in it, what type of maintenance work is to required, on what frequency, what would be its duration, it has to be done in running or stopped condition of machine etc all details are included with reference to CLIT which is Cleaning, Lubrication, Inspection and Tightening so this all aspects are to deal more frequently. Figure 1 shows an example of a CLIT sheet that a worker will have on its hand and work according to it which becomes very easy for them to work. Then comes the Fugai identification which is finding the abnormality in the machine. So if a worker finds any abnormality in the machine he has to put a Fugai tag at that place so everyone can notice it and the person responsible for solving that error could solve the abnormality. Kaizen also plays an important role in culture change as it is a path of connecting the lower and middle level to the higher level staff. Its generally the improvement done by the lower and middle level staff who are practically dealing with the machine and try to do some improvement work continuously. So there are many changes which I notice during the period of my role in industry as many creative ideas were brought by the lower and middle level staff to the TPM team. Also they were awarded with trophies for their good initiatives.

The main important need of cultural improvement was self discipline also as there are occurrence which i had seen in the industry as the required thing does not get at the time when its needed as whether it's a tool or an part of machine as no one bother and everything is mixed up and when needed could not found it. So by TPM 5S is the base step of TPM which includes Set, Sort, Set in order , Shine and sustain. So above problem of not getting tool or part will be solved and its practise could be seen in the figure 2 and 3. Cleaning and arranging the work place helps in recognize the issues. Distinguishing issues and obvious to individuals gives a chance of progress and getting fathomed . On the off chance that 5S isn't paid attention to, it can prompt 5D for example Deferrals, Defects, Dissatisfied clients, Declining benefits and Demoralized representatives. It should be sensibly natural how 5S makes an establishment for well-running gear. For instance, in a perfect and efficient workplace, instruments and parts are a lot simpler to discover, and it is a lot simpler to spot rising issues, for example, liquid releases, material spills, metal shavings from surprising wear, hairline breaks in systems, and so forth.

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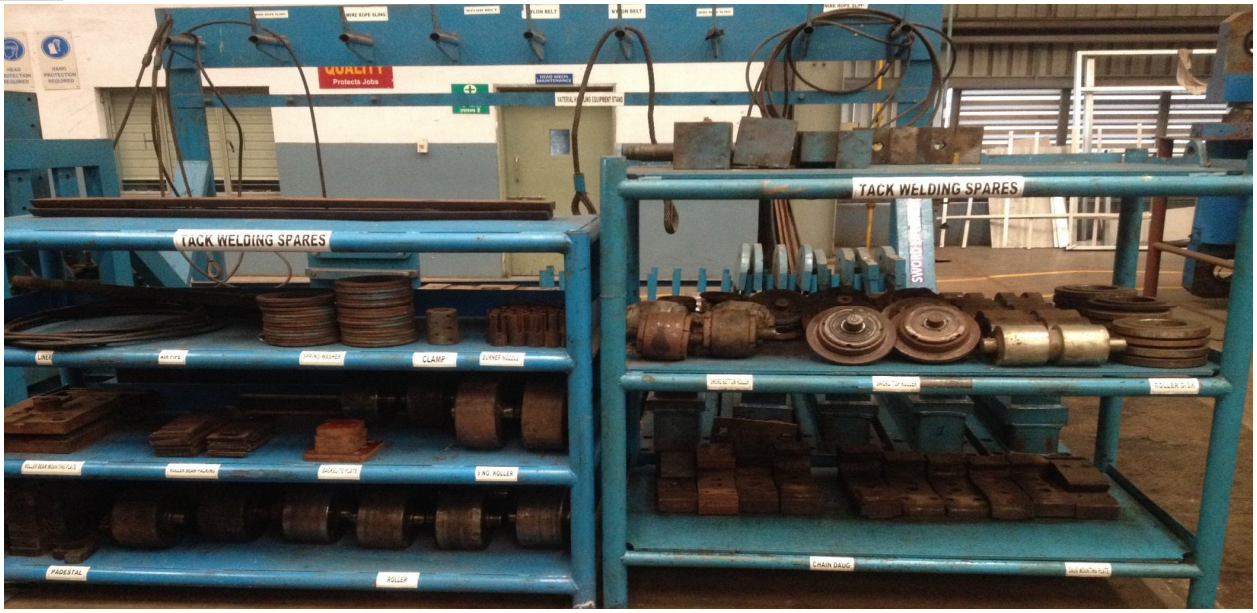

Figure 2 : Sort 5S

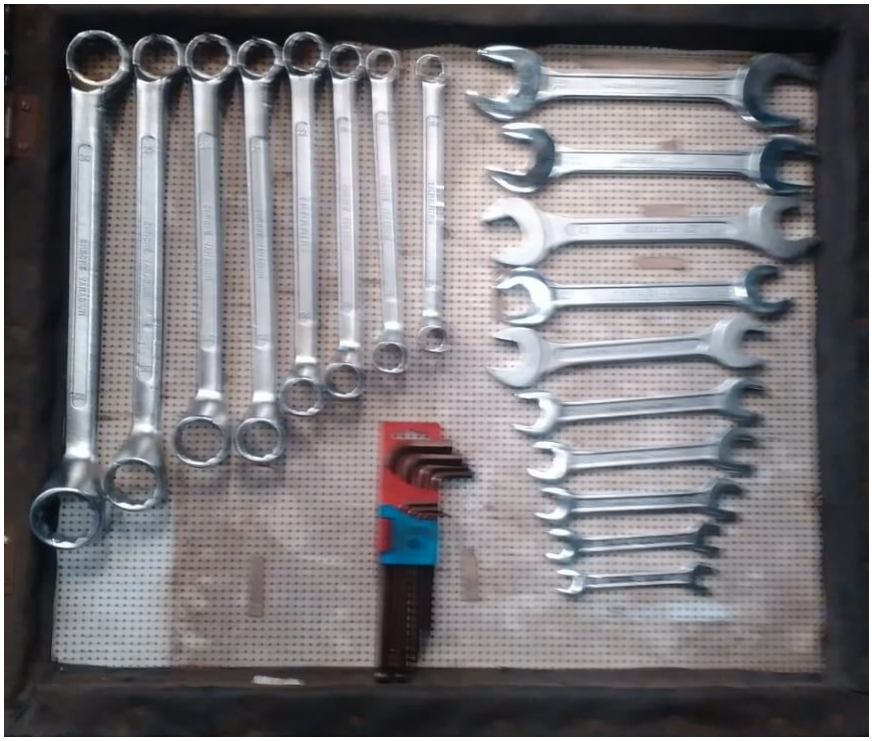

Figure 3 : Set in order 5S

Then after there are some things which are related to the topic is about one point lesson known as OPL which is been shown near the machine. So the main thing of this is to that a new person comes to work at that machine or station than he could easily learn about the machine and what things to keep in mind before starting the work on machine. This usually happens in the industry as due to break down or no work the workers are shifted to other plant of the industry to work. So the new person could make mistake if he has not done work on similar machine. So for that OPL photos are kept near machine so a new person could keep in mind the important aspects. Its example could be seen in the figure 4.

Figure 4 : OPL.1

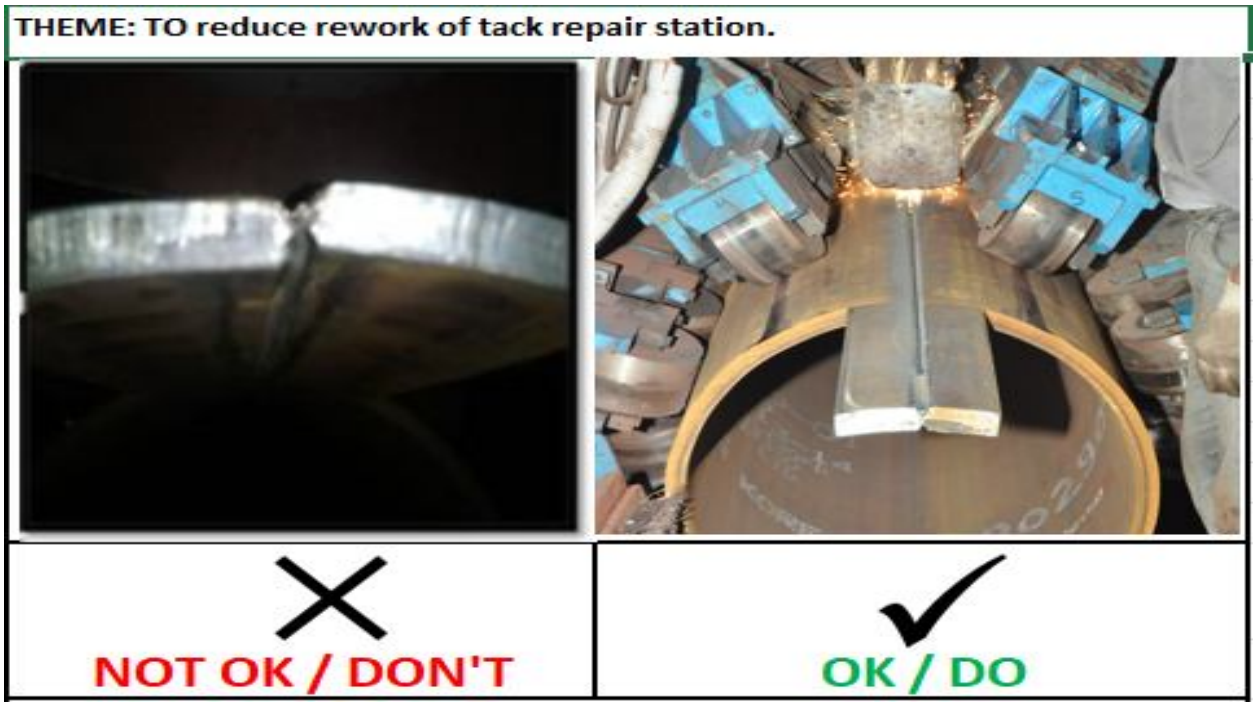

Figure 5 : OPL.1

IV. CONCLUSION

In practice of the initial steps of Total Productive Maintenance there is a drastic change in the employee morale which directly lead to the cultural change in a industry. As now the employees feels the ownership of their machine which previously was a just work station to work for his shift which is now changed his priority for the machine. So in different parts of the cultural improvements could be easily spotted in the industry. And yes there is a lot of change as of changing the traditional mindset to the new mindset according to the TPM methodology. So its beneficial in many aspects in future to the industry.

V. ACKNOWLEDGMENT

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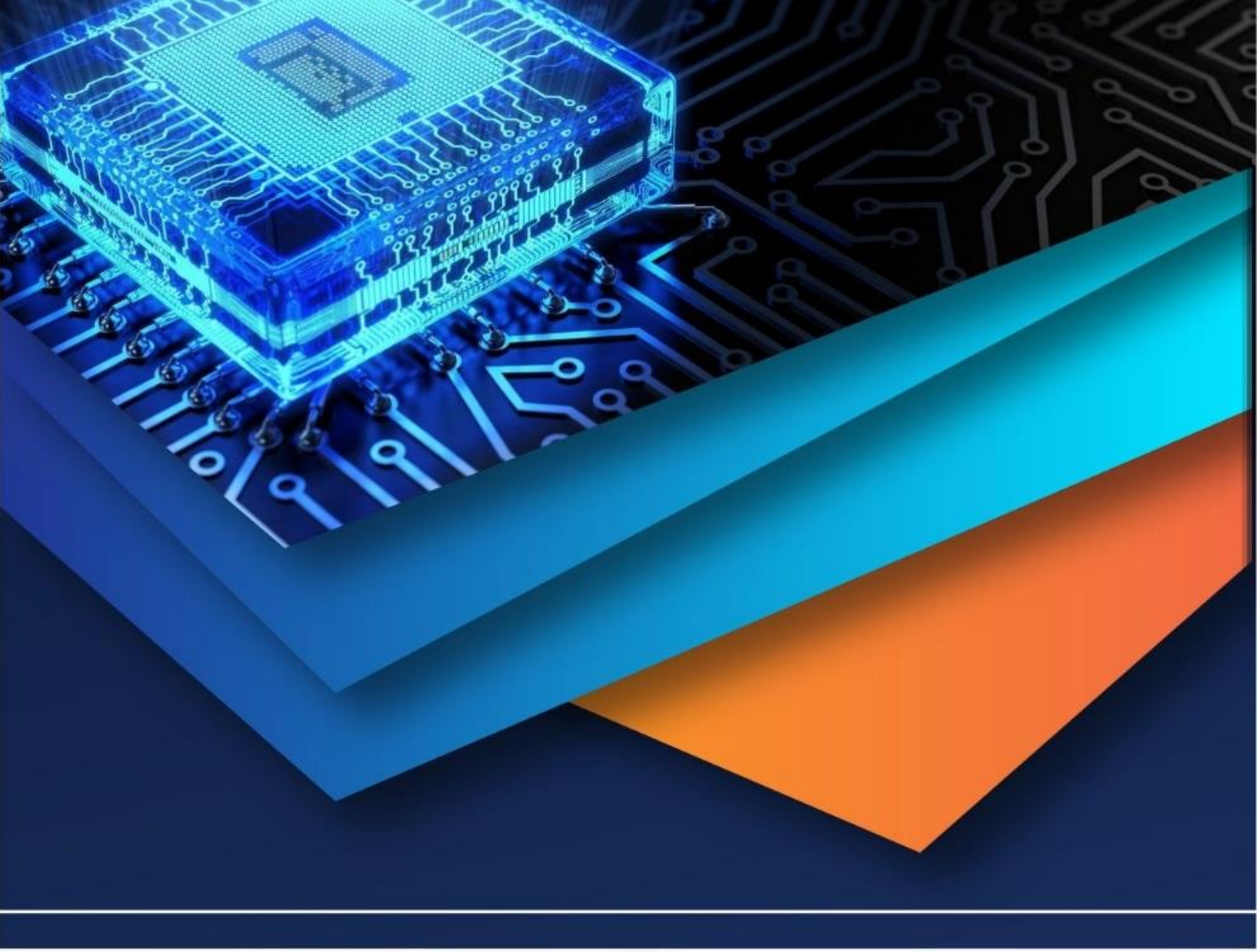

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Clinical Decision Support Systems

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ABSTRACT

Nowadays, every field is digitizing their data for easy access at anytime and anywhere or even for enclosed cabinet servers, especially the health care sector. But, that is not the only reason health care sector is computerizing its data. These huge chucks of records are used for research purposes. Many hospitals are working with education institutes with research departments (Damian Borbolla et.al 2010).CDSS performs Knowledge-based analyses on these EHRs and running disease prediction models on these data is done. There may be many complications. We have reviewed the problems faced by such system from previous researches and implemented systems.

Keywords : Clinical Decision Support System, Decision Support System, Disease Prediction, Machine Learning.

I. INTRODUCTION

The medical records of thousands of patients are recorded digitally day-to-day which is known as computerized physician order entry (CPOE), while previous data is being stored in the electronic health records (EHRs). The benefits of doing so is to use these big data for data science and machine learning analysis [3].These EHRs are implemented into machine learning algorithms which are used for disease prediction.

Decision Support System (DSS) in health care domain or Clinical Decision Support System (CDSS) a type of software system that supports the decision-making of a clinician or health care professional. These systems are commonly defined as any type of application system that presents analytic data to help doctors or other medical professionals make decisions.

II. BACKGROUND

Over the years, four architectural phases of CDSS have been evolved.

Namely,

1) Standalone decision support systems beginning in 1959 known as computerized physician [1].
2) Integrated systems, beginning in 1967 [1].
3) Standards-based system, beginning in 1989 [1].
4) Service models, beginning in 2005 [1].

These architectural phases depict how the DSS interacts with CPOEs or EHRs.

III. METHODS AND MATERIAL

3. Problem

Recurring problems in CDSS are as follows:

3.1 Fixed knowledge representation

Knowledge-based data discovery requires fixed knowledge representation, there are also terminology issues and EHR maybe located on different sources. This leads to difficulties in transferring from one place to another [1].

3.2 Missing values

The conversion of health records into EHR can result in some missing values. The manual entry of data such as pharmacy entries into the database, results in errors, incorrect or missing values and. Also, some patients may not have conducted all the examinations. But, machine learning algorithm requires one to have complete dataset and most of them does not consider records with missing values. Generally, data scientists were required to fill missing values with either zero or average of other values.

Missing data problem has a better solution. the authors (Uiwon Hwang et.al 2018) are motivated to develop general adverbial networks (GANs). In GAN, a discriminator is used against such missing and/or fake data in EHRs. No other framework has used discriminator for missing data imputation till date. The author proposes auxiliary classifier GANs, a stacked encoder and an unsupervised learning algorithm in their framework.

3.3 Imbalanced Dataset

In some cases, the dataset used for disease prediction maybe imbalanced which maybe lead to less accurate result. The EHR dataset maybe cohort and so it gives biased results. One must have access to varied record of patients with varied symptoms and lab report results to increase the efficient output. These ideal datasets may not be always available.

3.4 Cost

Developing a full-fledged CPOE system for a CDSS can be very costly but not as costly as purchasing one."Brigham and Womens Hospital has reported cost of 1.9 million USB for developing and implementing CPOE in 1992, with ongoing maintenance costs of 500,000 USB per year, although this was incremental to what was already highly developed clinical system [6].Although, the medical error rates have drastically decreased [2].

3.5 Effectiveness

This study (Kensaku Kawamoto et.al 2005) shows that some parameters or features are more important for effective prediction of disease. Success rate of CDSS with and without primary features and found that it was just over 0.05 [5].

IV.CONCLUSION

In this survey paper, we described CDSS being implemented into CPOEs and EHRs and the issues that can occur in doing so.So, one must account for these problems.

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